

Serial No.: 10/666,451
Examiner: David Isabella
Art Unit: 3738

STATEMENT OF THE CLAIMS

1. (currently amended) A stapedial prosthesis sized to be implanted as a replacement for the stapes between the incus and the oval window of the middle ear, comprising:
 - a) a body defining a bucket sized to at least partially receive a portion of the incus, and a shaft having a length sufficient to extend from the incus to the oval window; and
 - b) a spring-loaded titanium handle coupled to said bucket.
2. (canceled)
3. (currently amended) A stapedial prosthesis according to claim 2 1, wherein:

said titanium is commercial pure grade 4 titanium.
4. (original) A stapedial prosthesis according to claim 1, wherein:

said bucket includes a wall with holes therein, and said handle is U-shaped and has two ends which are received, under load, in said holes of said bucket.
5. (original) A stapedial prosthesis according to claim 4, wherein:

said holes in said bucket are diametrically opposed.
6. (original) A stapedial prosthesis according to claim 1, wherein:

said bucket includes a rim and a notch in said rim.

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7. (original) A stapedial prosthesis according to claim 6, wherein:

said bucket includes a wall with holes therein, and said handle is U-shaped and has two ends which are received, under load, in said holes of said bucket, and said notch terminates above said holes.

8. (currently amended) A stapedial prosthesis according to claim 1, wherein:

said bucket has a wall with a plurality of slots defining wall segments, and said wall segments are manipulatable by a force to adjust an inner dimension of said bucket, said bucket retaining said adjusted inner diameter after said force is removed.

9. (original) A stapedial prosthesis sized to be implanted as a replacement for the stapes between the incus and the oval window of the middle ear, comprising:

a) a body defining a bucket sized to at least partially receive a portion of an incus, and a shaft having a length sufficient to extend from the incus to the oval window; and

b) a handle rotatably coupled to said bucket, wherein said handle is constructed from titanium.

10. (original) A stapedial prosthesis according to claim 9, wherein:

said handle is constructed from commercially pure grade 4 titanium.

11. (original) A stapedial prosthesis according to claim 9, wherein:

said body is constructed of titanium.

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12. (original) A stapedial prosthesis according to claim 11, wherein:
said body is constructed of commercial pure Grade 2 titanium.
13. (original) A stapedial prosthesis according to claim 9, wherein:
said handle is spring-loaded.
14. (currently amended) A stapedial prosthesis sized to be implanted as a replacement for the stapes between the incus and the oval window of the middle ear, comprising:
a) a body defining a bucket and a shaft, said bucket sized to at least partially receive a portion of an incus and having a wall with a plurality of slots defining wall segments, a portion of said bucket being adjustable in size diameter by manipulation of said wall segments and retaining said adjusted diameter after a force causing said adjusted diameter is removed, and said shaft having a length sufficient to extend from the incus to the oval window; and
b) a bail handle coupled to said bucket.
15. (original) A stapedial prosthesis according to claim 14, wherein:
said slots are approximately 0.1-mm wide.
16. (original) A stapedial prosthesis according to claim 15, wherein:
said slots define arcs about a circumference of the bucket which are substantially smaller than arcs traversed by the wall segments defined by the slots.

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17. (original) A stapedial prosthesis according to claim 15, wherein:

said arcs defined by said slots are smaller than said arcs defined by said wall segments by a factor of at least four.

18. (original) A stapedial prosthesis according to claim 14, wherein:

said bucket has a closed bottom portion.

19. - 26. (canceled)

27. (currently amended) A stapedial prosthesis sized to be implanted as a replacement for the stapes between the incus and the oval window of the middle ear, comprising:

a) a body defining a bucket with a cavity sized to at least partially receive a portion of an incus and having a radial center, said bucket including a wall with openings therein, and a shaft having a length sufficient to extend from the incus to the oval window; and

b) a handle element coupled to said bucket at said openings, said handle element ~~not~~ substantially protruding into said cavity having ends which are detached from each other but located within the body, but do not extend to or past said radial center of said body.

28. (currently amended) A stapedial prosthesis sized to be implanted as a replacement for the stapes between the incus and the oval window of the middle ear, comprising:

a) a body defining a bucket with a cavity sized to at least partially receive a portion of an incus, and a shaft having a length sufficient to extend from the incus to the oval window; and

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b) a handle element having first and second ends, said handle element coupled to said bucket, and first and second ends (i) each being (i) uncoupled from the other, (ii) each being located within said body, and (ii) (iii) each not passing the other within said bucket.

29. (currently amended) A method of implanting a stapedial prosthesis between the incus and oval window of the middle ear, comprising:

- a) providing a stapedial prosthesis including a bucket with a plurality of having a wall segments, a shaft fixed to the bucket, and a spring-loaded bail handle movably coupled to the bucket, the bail handle oriented so as to provide clear entry to the bucket;
- b) positioning a portion of the incus into the bucket; ~~and~~
- c) moving the bail handle until the bail handle contacts the incus; and
- d) bending one or more segments of the wall of the bucket to adjust a diameter of said bucket to the incus, said bucket retaining said adjusted diameter after said bending force is removed.

30. (canceled)

31. (currently amended) A method according to claim ~~30~~ 29, wherein:

said bending includes bending one or more segments until at least one of the segments contacts the incus.

32. (currently amended) A method according to claim ~~30~~ 29, wherein:

said bending occurs before said moving.

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33. (currently amended) A method according to claim ~~30~~ 29, wherein:

said bending occurs after said moving.

34. (original) A method according to claim 29, wherein:

said moving the bail handle includes rotating the bail handle.

35. (original) A method according to claim 34, wherein:

said moving the bail handle includes pulling the bail handle over a portion of the incus.

36. (original) A method according to claim 35, wherein:

said moving the bail handle includes causing the bail handle to pass through a plane containing both the bail handle and a longitudinal axis of the bucket and the shaft.

37. (original) A method according to claim 29, wherein:

said moving the bail handle includes biasing the incus relative to the bucket with the spring-loaded bail handle.

38. (original) A method according to claim 29, wherein:

after said moving, the bail handle is substantially fixed relative to the bucket via the spring-load on the bail handle.

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39. (original) A method according to claim 29, wherein:

said providing includes providing a stapedial prosthesis with a titanium bail handle.

40. (new) A stapedial prosthesis according to claim 8, wherein:

said wall segments are permanently deformable to permanently adjust said inner dimension of said bucket.

41. (new) A stapedial prosthesis according to claim 14, wherein:

said shaft is stepped in diameter.

42. (new) A stapedial prosthesis according to claim 14, wherein:

said shaft has a central portion and first and second end portions, said central portion having a smaller diameter than said first end portion, and said second end portion being coupled to said bucket.

43. (new) A stapedial prosthesis according to claim 42, wherein:

said shaft is made of a metal or metal alloy, and said first end portion defines holes sized for tissue ingrowth.

44. (new) A stapedial prosthesis according to claim 42, wherein:

said first end portion has a length not exceeding 1-mm.

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45. (new) A stapedial prosthesis according to claim 42, wherein:

said first end portion has a length greater than 0.3-mm.

46. (new) A stapedial prosthesis according to claim 42, wherein:

said central portion has a diameter of approximately 0.3-mm and said first end portion has a diameter of approximately 0.4-mm to 0.8-mm.

47. (new) A stapedial prosthesis according to claim 42, wherein:

said central portion has a length at least approximately 2.4 times a length of said first end.

48. (new) A stapedial prosthesis sized to be implanted as a replacement for the stapes between the incus and the oval window of the middle ear, comprising:

- a) a bucket sized to at least partially receive a portion of the incus;
- b) a shaft extending from said bucket having a length sufficient to extend from the incus to the oval window; and
- c) a titanium spring-loaded handle coupled to said bucket, wherein a constant force is required to rotate said handle relative to said bucket completely through a permitted degree of rotation.

49. (new) A stapedial prosthesis according to claim 48, wherein:

said degree of rotation is approximately 180°